

Minutes for VRVS Conference Monday May 13, 2002 12:00-13:58 EDT

The VRVS conference held in the Saturn Room was joined at some point by: Bill Paciesas, David Band, Stefan Larsson, Alexandre Chekhtman, Roland Svensson, Monica Brigida, Jeffrey Scargle, group(?) identified as Perugia Videoconferenza, Miguel de Val Borro, Nicola Omodei, Luis Borgonovo, Felix Ryde, Francesco Longo, Guido Barbiellini, Steve Ritz, Jay Norris, Jerry Bonnell.

Jay Norris welcomed the participants and noted that some were still having technical difficulties with the VRVS software and set up. Still, many were able to join and participate.

Jay Norris discussed membership in this group and related “working groups.”

Francesco Longo indicated that the GRB and Solar Flare Science team website is OK but suggested providing appropriate links with the list of related working groups (action item adopted by JB).

Prefacing the presentations and discussions of GLAST GRB simulations, Jeff Scargle notes that it would be nice if the simulations provided both the true shape of the GRB time history as well as a randomly sampled observed burst signal to facilitate burst trigger studies.

David Band reminds us that the two GLAST GRB simulations considered are model dependent. One adopts a physical model of shocks in a relativistic fireball, while the other extrapolates low energy (BATSE-observed) burst properties to GLAST energies.

Norris gave a scheduled presentation on an empirical GLAST GRB simulator written in IDL and being converted to C++.

Nicola Omodei gave a scheduled presentation on his GLAST burst simulator based on internal shock models. This simulator is written in C++ and incorporated in GLASTsim.

The ensuing discussion (Band, Norris, Omodei, others ...) clarifies the point that Norris' simulation uses spectra and time profiles from BATSE bursts and considerations based on EGRET data to build the simulated bursts at GLAST energies. Also, Omodei's simulation can be normalized to the BATSE results.

Steve Ritz asks “Can you share efforts to put/develop models in GLASTsim?” Omodei responds that he is already talking with GSFC programmer about implanting his GRB simulation in framework of the Flux Service. Francesco Longo suggests a discussion on requirements (e.g. outputs in photons vs rates) before embarking on code sharing for the simulations. Send email to bonnell ([bonnell@grossc.gsfc.nasa.gov](mailto:bonnell@grossc.gsfc.nasa.gov)) if you want to form a group to discuss such code requirements.

GLAST transient on-board alerts presentation was given by Ritz/Norris. Points were made that transient recognition requirements were designed for GRBs (e.g. time histories, energies, localizations) and that it will probably not be possible to telemeter individual photon events as part of the alert.

This group needs to provide input to flight software requirements. Good news: The flight software group is using full GLASTsim. (JPN action item to follow up on this with JJ?)

Norris presented a strawman LAT trigger algorithm for GRBs which needs to be retested adopting higher background levels. Ritz notes that it would be well to assume only that the standard on-board event “cuts” will be available (i.e. no special alert processing mode).

Longo gave spatial likelihood trigger presentation summarizing operating GRB triggers used by past, present and future missions.

Jeff Scargle presented concept map concept for developing Bayesian change point-style temporal triggers. Check out Knowledge Soup software at URL <http://cmap.coginst.uwf.edu/>. It's good for you too.

Norris suggests further email correspondence about GRB trigger algorithms.

David Band introduces the GLAST SSC and notes that the SSC focus would understandably be on science tools of a general interest rather than specific scientific programs/objectives. A combined LAT/GBM tool for generating time-dependent GRB spectra was offered as an example.

Guido Barbiellini presented considerations of recent developments on Quantum Gravity constraints. Check out <http://www.ts.infn.it/~longof/QG.pdf>.

... the Saturn room meeting is about to close ...

Action item for all: Norris requests agenda items for the next VRVS meeting. If you have any, email them to him ([jnorris@lheapop.gsfc.nasa.gov](mailto:jnorris@lheapop.gsfc.nasa.gov))

Another VRVS meeting will likely be scheduled before the June GLAST SLAC meeting.

To amend these minutes please send email to Jerry Bonnell [bonnell@grossc.gsfc.nasa.gov](mailto:bonnell@grossc.gsfc.nasa.gov).